California MLPA Master Plan Science Advisory Team
List of Species Likely to Benefit from
Marine Protected Areas in the MLPA North Central Coast Study Region
(revised April 14, 2008)

The Marine Life Protection Act (MLPA) requires that species likely to benefit from marine protected areas (MPAs) be identified; identification of these species will contribute to the identification of habitat areas that will support achieving the goals of the MLPA. The draft *Marine Life Protection Act Master Plan for Marine Protected Areas (July 2006)* includes a broad list of species likely to benefit from protection within MPAs. The master plan also indicates that regional lists will be developed by the master plan science advisory team (SAT) for each study region of the California coast.

Attached to this document are the list of species likely to benefit for the MLPA North Central Coast Study Region (Alder Creek/Point Arena in Mendocino County to Pigeon Point in San Mateo County), as well as a list of the species *most likely to benefit* for the study region. These lists were adopted by the SAT on October 1, 2007, but may be modified by the SAT in the future as more information becomes available.

Species are included in the list of species likely to benefit if they meet one or more of these conditions:

- They occur in the MLPA North Central Coast Study Region.
- They are taken directly or indirectly in commercial or recreational fisheries.
- They have life history characteristics that make them more conducive to protection by MPAs, such as: sedentary behavior, long life spans, slow growth, or association with habitats that need additional spatial protection. An MPA would be expected to increase the species abundance or spawning biomass if the species is at an abnormally low abundance or abnormally low size frequency (i.e. below the range of natural fluctuations).

While this list is approximate, there are other species that may benefit or even diminish by establishing an MPA. In addition, it should be noted that many species have not yet been assessed for abundance or size frequency or their full life history requirements are not yet known.

The SAT defined the species *most likely to benefit* as those likely to show a detectable change in local population as a result of MPA implementation. Species are included in the species most likely to benefit list if they meet one or more of the following conditions:

- There is evidence for direct fishing effects on the species in question (e.g., the species is targeted by a fishery, known to be taken as bycatch in a local fishery, or fishing reduces important resources required of a species).
- The species suffers negative impacts associated with human activities other than fishing.
- A significant proportion of the species distribution occurs within habitats represented in the study region.

Table 1: Invertebrate species MOST likely to benefit from marine protected areas in the MLPA North Central Coast Study Region

abalone, red	*Haliotis rufescens*
clam, littleneck (Tomales Bay cockle)	*Protothaca staminea*
limpets	*Lottia gigantea*
mussels, native	*Mytilus californianus*
snail, turban	*Tegula funebralis*
urchin, red	*Strongylocentrotus franciscanus*

Table 2: Fish species MOST likely to benefit from marine protected areas in the MLPA North Central Coast Study Region

cabezon	*Scorpaenichthys marmoratus*
eel, wolf	*Anarrhichthys ocellatus*
flounder, starry	*Platichthys stellatus*
greenling, kelp	*Hexagrammos decagrammus*
greenling, rock	*Hexagrammos lagocephalus*
lingcod	*Ophiodon elongatus*
prickleback, monkeyface	*Cebidichthys violaceus*
prickleback, rock	*Xiphister mucosus*
ray, bat	*Myliobatis californicus*
rockfish, black	*Sebastes melanops*
rockfish, black-and-yellow	*Sebastes chrysomelas*
rockfish, blue	*Sebastes mystinus*
rockfish, bocaccio	*Sebastes paucispinis*
rockfish, brown	*Sebastes auriculatus*
rockfish, calico	*Sebastes dalli*
rockfish, China	*Sebastes nebulosus*
rockfish, copper	*Sebastes caurinus*
rockfish, flag	*Sebastes rubrivinctus*
rockfish, gopher	*Sebastes carnatus*
rockfish, grass	*Sebastes rastrelliger*
rockfish, greenspotted	*Sebastes chlorostictus*
rockfish, kelp	*Sebastes atrovirens*
rockfish, olive	*Sebastes serranoides*
rockfish, quillback	*Sebastes maliger*
rockfish, rosy	*Sebastes rosaceus*
rockfish, speckled	*Sebastes ovalis*
rockfish, squarespot	*Sebastes hopkinsi*
rockfish, starry	*Sebastes constellatus*
rockfish, treefish	*Sebastes serriceps*
rockfish, vermilion	*Sebastes miniatus*
rockfish, yelloweye	Sebastes ruberrimus

rockfish, yellowtail	Sebastes flavidus
smelt, surf	*Hypomesus pretiosus*
surfperch, barred	*Amphistichus argenteus*
surfperch, black	*Embiotoca jacksoni*
surfperch, calico	*Amphistichus koelzi*
surfperch, pile	*Damalichthys vacca*
surfperch, rainbow	*Hypsurus caryi*
surfperch, redtail	*Amphistichus rhodoterus*
surfperch, rubberlip	*Phacochilus toxotes*
surfperch, shiner	*Cymatogaster aggregata*
surfperch, striped	*Embiotoca lateralis*
surfperch, walleye	*Hyperprosopon argenteum*
surfperch, white	*Phanerodon furcatus*

Table 3: Bird and Mammal species MOST likely to benefit from marine protected areas in the MLPA North Central Coast Study Region

brant	*Branta bernicla*
cormorant, Brandt's	*Phalacrocorax penicillatus*
cormorant, double-crested	*Phalacrocorax auritus*
cormorant, pelagic	*Phalacrocorax pelagicus*
grebe, Western/Clark's	*Aechmophorus occidentalis, clarkii*
guillemot, pigeon	*Cepphus columba*
murre, common	*Uria aalge*
murrelet, marbled	*Brachyramphus marmoratus*
oystercatcher, black	*Haematopus bachmani*
plover, snowy	*Charadrius alexandrinus*
porpoise, harbor	*Phocoena phocena*
sandpiper, western	*Calidris mauri*
scaup, lesser	*Aythya affinis*
scoter, surf	*Melanitta perspicillata*
sea lion, Steller	*Eumetopias jubatus*
sea otter, southern	*Enhydra lutris*
seal, harbor	*Phoca vitulina*
surfbird	*Aphriza virgata*
willet	*Catoptrophorus semipalmatus*